INCH POUND

MIL-PRF-81/4D
25 May 1999
SUPERSEDING
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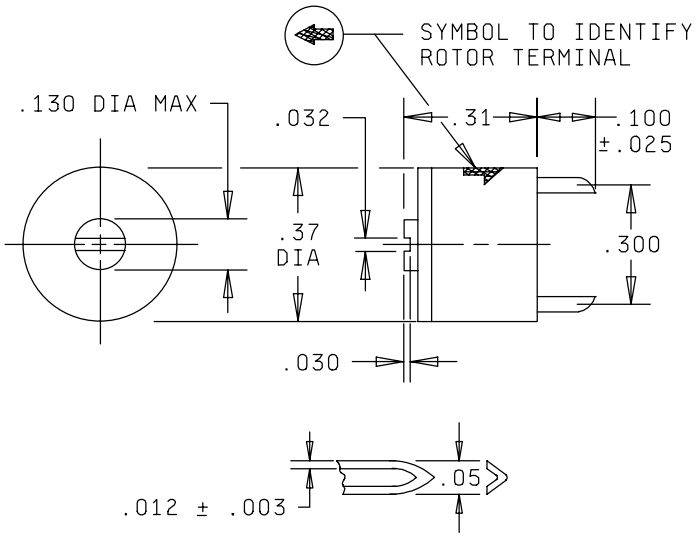
31 March 1992

PERFORMANCE SPECIFICATION SHEET

CAPACITORS, VARIABLE, CERAMIC DIELECTRIC,
STYLES CV31 AND CV32

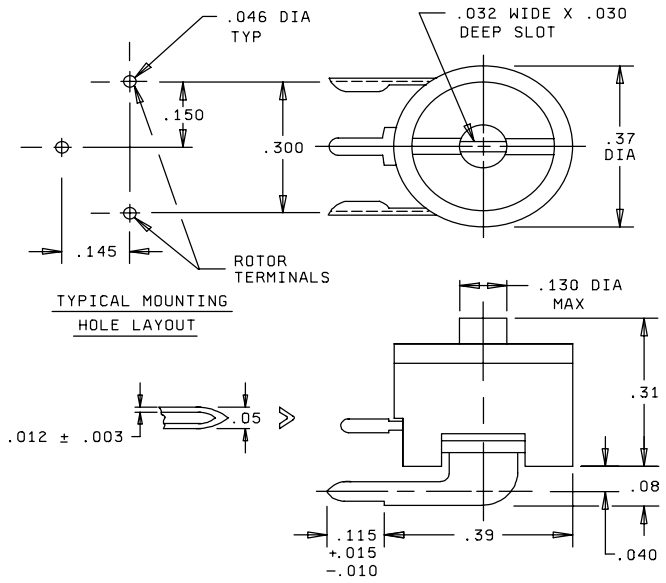
This specification is approved for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the product described herein shall consist of this specification and MIL-PRF-81.



Style CV31

FIGURE 1. Dimensions and configurations.



Inches	mm	Inches	mm
.003	.08	.08	2.03
.01	.25	.100	2.54
.012	.30	.115	2.92
.015	.38	.130	3.30
.025	.64	.145	3.68
.030	.76	.150	3.81
.032	.81	.300	7.62
.040	1.02	.31	7.87
.046	1.17	.37	9.40
.05	1.27	.39	9.91

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerances are ±.02 (0.51 mm) for two-place decimals and ±.010 (0.25 mm) for three-place decimals.

Style CV32

FIGURE 1. Dimensions and configurations - Continued.

REQUIREMENTS:

Dimensions and configuration: See figure 1.

Capacitance value: See table I.

DC rated voltage: See table I.

Operating temperature range: -55°C to +125°C.

Characteristics: See table I.

TABLE I. Styles CV31 and CV32.

Type designation 1/	Capacitance (pF)		DC rated voltage (volts)	Characteristics				
				Symbol	Capacitance change from value at +25°C			
					At -55°C		At +125°C	
	Minimum	Maximum			Minimum percent	Maximum percent	Minimum percent	Maximum percent
CV3_A080	2.0	8.0	350	A	-4.5	+2.0	-2.5	+2.0
CV3_A180	5.5	18.0	350	A	-4.5	+2.0	-2.5	+2.0
CV3_B110	2.5	11.0	350	B	-1.0	+3.5	-2.5	-0.5
CV3_B250	7.0	25.0	350	B	-1.0	+3.5	-2.5	-0.5
CV3_C100	3.0	10.0	350	C	-1.0	+6.5	-4.0	-1.0
CV3_C250	8.0	25.0	350	C	-1.0	+6.5	-4.0	-1.0
CV3_D150	3.0	15.0	200	D	+1.5	+8.2	-5.0	-1.5
CV3_D350	9.0	35.0	200	D	+1.5	+8.2	-5.0	-1.5
CV3_E600	15.0	60.0	200	E	+3.0	+14.0	-10.0	-3.0

1/ The complete type designation will include an additional digit to indicate style CV31 or CV32.

Dielectric withstanding voltage: Method 301 of MIL-STD-202. A dc potential of 2.2 times rated voltage applied between terminals for 3 seconds ±2 seconds.

Temperature coefficient: Within the limits specified for the applicable characteristic.

Capacitance drift: Within 0.75 percent of initial step 1 measurement or 0.50 picofarad (pF), whichever is greater.

Terminal strength:

Pull test: Capacitor held by body and 4-pound-load applied to each terminal for at least 10 seconds.

Torque: Not less than 1 ounce-inch nor more than 6 ounce-inches.

Barometric pressure (reduced):

Method 105 of MIL-STD-202, condition D (100,000 feet).

Test potential: 100 percent of dc rated voltage.

Insulation resistance:

Method 302 of MIL-STD-202, condition A, 100 volts dc applied: 10,000 megohms, minimum.

Capacitance:

Method 305 of MIL-STD-202.

DF: At 1 MHz ±100 kHz, at maximum and minimum capacitance: Shall be not more than 0.2 percent.

Fatigue:

ΔC: Shall not exceed 12 percent or 0.75 pF, whichever is greater.

Torque: Not less than 1 ounce-inch nor more than 10 ounce-inches.

Life:

Qualification test: 1,000 hours at +85°C, 150 percent of rated volts dc with a peak alternating voltage of 50 percent of rated volts dc (100 hertz or less) superimposed.

Insulation resistance: Initial requirement.

Capacitance change: Shall not exceed ±8 percent of initial value or 0.5 pF, whichever is greater.

Group C life: Conditions and requirements are the same as that required for qualification.

Shock (specified pulse): Method 213 of MIL-STD-202, condition I (100 g's).

Vibration, high frequency:

Method 204 of MIL-STD-202, condition B (15 g's).

Capacitance change: Shall not exceed ±2 percent or 0.5 pF, whichever is greater.

DF: Shall be not more than 0.2 percent.

A dc potential of 2.2 times rated voltage applied between terminals for 3 seconds ±2 seconds.

Insulation resistance:

10,000 megohms, minimum.

Moisture resistance:

Method 106 of MIL-STD-202:

Insulation resistance: 10,000 megohms, minimum.

Capacitance change: Shall not exceed ±5 percent of nominal value or 0.5 pF, whichever is greater.

DF: Shall be not more than 0.5 percent.

Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

Custodians:
Army - CR
Navy - EC
Air Force - 11
DLA - CC

Review activity:
Air Force - 19

Preparing activity:
DLA - CC

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